WHAT IS CLAIMED IS:

1.   A reproducing method of receiving and reproducing data and outputting the data into an external device, said reproducing method comprising the steps of:

after reproducing the data, selecting, from a plurality of descrambling methods, a descrambling method corresponding to a type of said reproduced data;

authenticating said external device by an authenticating method which is included in a plurality of authenticating methods for authenticating said external device and corresponds to the selected descrambling method; and

outputting said data.

2.   A reproducing method of receiving data outputted from an external device and reproducing the data, said reproducing method comprising the steps of:

selecting, from a plurality of descrambling methods, a descrambling method corresponding to a type of said received data;

authenticating said external device by an authenticating method which is included in a plurality of authenticating methods for authenticating said external device and corresponds to the selected descrambling method;

receiving the data outputted from said external device after the authentication is made certain; and

reproducing said received data.

3.   A data reproducing method for a plurality of devices, for sending and receiving data by authenticating the plurality of devices with each other, said data reproducing method comprises the steps of:

selecting, from a plurality of descrambling methods, a scrambling method corresponding to a type of said data, executing authentication by an authenticating method corresponding to the selected descrambling method, selected from a plurality of authenticating methods.

4.   A data reproducing apparatus for receiving and reproducing data and outputting the data to an external device, said data reproducing apparatus comprising:

reproducing means for reproducing said data;

a plurality of descrambling methods for descrambling said data;

a plurality of authenticating means for authenticating said apparatus with said external device; and

selecting means for selecting a descrambling means from said plurality of descrambling means,

wherein said selecting means selects, from said plurality of descrambling means, a descrambling means corresponding to a type of the data reproduced by said reproducing means and wherein an authenticating means corresponding to said selected descrambling means, selected from said plurality of authenticating means, authenticates said external device and outputs said data to said external device.

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5.   An apparatus for receiving data outputted from an external device and reproducing the data, said reproducing apparatus comprises:

a plurality of descrambling means for descrambling said data;

a plurality of authenticating means for authenticating said external device;

selecting means for selecting one of said plurality of descrambling means; and

reproducing means for reproducing said data,

wherein, of said plurality of descrambling means, a descrambling method corresponding to a type of said data is used so that, of said plurality of authenticating means, an authenticating means corresponding to a type of said corresponding descrambling means authenticates said external device and outputs said data after the authentication is made certain and that said reproducing means reproduces the data outputted by said

authenticating means having authenticated said external device.

6.   A reproducing apparatus having a plurality of data

reproducing apparatuses for reproducing data by sending and receiving the

data to and from each other based on the authentication with each other,

wherein said plurality of data reproducing apparatuses each include a

plurality of descrambling means for scrambling data and a plurality of

authenticating means, wherein said reproducing apparatus selects

descrambling means which are included in said plurality of data

reproducing apparatuses and correspond to a type of said data and

authenticate each other by authenticating means which are included in said

plurality of authenticating means and correspond to said selected

descrambling means.

7.   The data reproducing apparatus as claimed in claim 4

wherein one of said plurality of descrambling means is selected based on

information for indicating a type of a recording medium.

8.   The data reproducing apparatus as claimed in claim 4,

wherein one of said plurality of descrambling means is selected based on

information for indicating a data type, such as if said data is a video signal,

an audio signal, a still picture signal, a program code, or any other data.

9.   The data reproducing apparatus as claimed in claim 4,
wherein one of said plurality of descrambling means is selected based on
copy control information contained in said data.

10.   The data reproducing apparatus as claimed in claim 4,
wherein one of said plurality of descrambling means is selected based on a
combination of information for indicating a type of a recording medium and
copy control information contained in said data.

11.   The data reproducing apparatus as claimed in claim 10,
wherein said information for indicating a type of a recording medium
includes information for indicating that the recording medium is a
reproduction-dedicated or recordable one, and said copy control
information includes information for indicating if the data is copy-free, copy-
prohibited, or copy-permitted for one generation.

12.   The data reproducing apparatus as claimed in claim 11,
wherein said combination of information includes a combination of three
kinds of information, that is, the information for indicating the medium is

reproduction-dedicated, the information for indicating the medium is recordable and if the data is copy-prohibited or copy-permitted for just one generation, and the information for indicating the medium is recordable and if the data is copy-free.

13. The data reproducing apparatus as claimed in claim 5 is a reproducing apparatus arranged to reproduce compressed video data and wherein said reproducing apparatus further includes means for detecting additional information added to the data reproduced by said reproducing means.

14. The data reproducing apparatus described in claim 13, wherein said reproducing means controls the output of said data based on said additional information if said additional information is copy control information.

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15. A data coding method for coding inputted data and outputting said coded data to an external device, wherein said data may or may not have been scrambled corresponding to a type of said data, said data coding method comprising the steps of:

of a plurality of authenticating methods for coding the data and

authenticating with said external device, selecting an authenticating method corresponding to a type of scrambling of said coded data, authenticating said external device by means of said selected authenticating method, and outputting said coded data.

16. A recording method for receiving inputted data outputted from an external device and recording the data, wherein said inputted data may or may not have been scrambled corresponding to a type of said inputted data, said recording method comprising the steps of:

authenticating said external device by means of an authenticating method corresponding to a type of scrambling of said inputted data, selected from a plurality of authenticating methods for authenticating said external device, inputting the data outputted from said external device and recording said inputted data after the authentication is made certain.

17. A data recording method for a plurality of devices for recording data by sending and receiving the data by authenticating said devices with each other, wherein said data may or may not have been scrambled corresponding to a type of said data, and wherein said authentication is executed by an authenticating method corresponding to a type of scrambling of said data, selected from a plurality of authenticating

methods.

18.　A data coding apparatus for coding inputted data and outputting said coded data to an external device, said data coding apparatus comprising:

coding means for coding said inputted data;

a plurality of authenticating means for authenticating said external device; and

selecting means for selecting an authenticating means from said plurality of authenticating means,

wherein said inputted data may or may not have been scrambled corresponding to a type of said inputted data, wherein said selecting means selects an authenticating means corresponding to a type of scrambling of said data from said plurality of authenticating means and said selected authenticating means authenticates said external device and outputs said coded data.

19.　A data recording apparatus for receiving inputted data outputted from an external device and recording said data, said data recording apparatus comprising:

a plurality of authenticating means for authenticating said external device;

selecting means for selecting an authenticating means from said plurality of authenticating means;

recording means for recording said data; and

wherein said inputted data may or may not have been scrambled corresponding to a type of said inputted data,

wherein an authenticating means corresponding to a type of scrambling of said inputted data, selected from said plurality of authenticating means, authenticates said external device and outputs said data after the authentication is made certain, and said recording means records the data outputted by said authenticating means having authenticated said external device.

20. A recording apparatus comprising: a data coding apparatus and a data recording apparatus, wherein said data coding apparatus comprising:

coding means for coding inputted data;

a plurality of authenticating means for authenticating an external device; and

selecting means for selecting an authenticating means from said plurality of authenticating means,

wherein said inputted data may or may not have been scrambled

corresponding to a type of said inputted data, wherein said selecting means selects an authenticating means corresponding to a type of scrambling of said data from said plurality of authenticating means and said selected authenticating means authenticates said external device and outputs said coded data, and

wherein said data recording apparatus comprising:

a plurality of another authenticating means for authenticating said external device;

selecting means for selecting an another authenticating means from said plurality of another authenticating means;

recording means for recording said data; and

wherein an another authenticating means corresponding to a type of scrambling of said inputted data, selected from said plurality of another authenticating means, authenticates said external device and outputs said data after the authentication is made certain, and, wherein said recording means records the data outputted by said another authenticating means having authenticated said external device, and

wherein the authenticating means of said data coding apparatus and the another authenticating means of said data recording apparatus are selected and operate to authenticate each other for transferring the data and recording said data.

21.   The data coding apparatus as claimed in claim 18, wherein one of said plurality of authenticating means is selected based on information for indicating a type of a recording medium on which the data is to be recorded and in correspondence to the scrambling of the data.

22.   The data coding apparatus as claimed in claim 18, wherein one of said plurality of authenticating means is selected based on copy control information and in correspondence to the scrambling of the data.

23.   The data coding apparatus as claimed in claim 18, wherein one of said plurality of authenticating means is selected based on a combination of the information for indicating a type of the recording medium on which the data is to be recorded and copy control information for the data to be recorded and in correspondence to the scrambling of the data.

24.   The data coding apparatus as claimed in claim 23, wherein each of said plurality of authenticating means includes scrambling means for executing a scrambling process corresponding to a combination of the information for indicating a type of said recording medium and the copy control information for the data to be recorded.

25. The data coding apparatus as claimed in claim 23, wherein the information for indicating a type of said recording medium includes information for indicating if the medium is reproduction-dedicated or recordable, and

the copy control information for the data to be recorded contains information for indicating if the data is copy-free, or is copy-prohibited, or copy-permitted for only one generation.

26. The data coding apparatus as claimed in claim 25, wherein said combination includes at least two information, that is, information for indicating if the medium is recordable and copy-prohibited or copy-permitted for only one generation and information for indicating if the medium is recordable and is copy-free.

27. The data coding apparatus as claimed in claim 18 is a data coding apparatus arranged to code and compress video data and further including detecting means for detecting additional information added to the data coded by said coding means and wherein said authenticating means controls the output of sad coded data along the additional information detected by said detecting means.

28.   A data processing apparatus having a plurality of data
processing means for sending/receiving data through a data bus, wherein
said data may or may not have been scrambled corresponding to a type of
said data, and wherein said plurality of data processing means each include
a plurality of authenticating means and said data processing means are
authenticated with each other by means of an authenticating means
corresponding to a type of the scrambling of the data to be transferred.

29.   The data processing apparatus as claimed in claim 28,
wherein said authenticating means executes said authentication before
transferring said data and, if all the authentications are not successful,
stops the data output to said data bus.

30.   The data processing apparatus as claimed in claim 28,
wherein said authenticating means executes an authentication
corresponding to a type of said data before transferring said data and, if
one or more data processing means are not successfully authenticated,
stops the data output to the data bus.

31.   The data processing apparatus as claimed in claim 28,
wherein said authenticating means executes an authentication

corresponding to a type of said data before transferring said data

and, if one or more data processing means are not successfully

authenticated, limits the type of the data to be outputted to the data bus.

32.　　The data processing apparatus as claimed in claim 28,

wherein said authenticating means executes an authentication

corresponding to a type of said data before transferring said data and, if

one or more data processing means are not successfully authenticated,

limits the type of the data to be outputted to the data bus to the successfully

authenticated device.

33.　　The data processing apparatus as claimed in claim 28,

wherein said authenticating means executes an authentication

corresponding to a type of said data before transferring said data and, if

one or more data processing means are not successfully authenticated,

outputs the data only if the data to be outputted to the data bus is copy-free

information.

34.　　An authenticating method for a plurality of devices for

transferring data among said devices, wherein said data may or may not

have been scrambled corresponding to a type of said data, and wherein an

authenticating method corresponding to a type of said data is selected from a plurality of authenticating methods to authenticate said devices with each other.

35.   A semiconductor chip wherein said reproducing means, said authenticating means and said selecting means in the data reproducing apparatus as claimed in claim 4 are provided.

36.   The data reproducing method according to claim 2, wherein when the received data has been scrambled, the received data is descrambled by a descrambling method corresponding to said authenticating method selected from a plurality of descrambling methods.